SONY®

Optical Disc Archive Drive Unit

ODS-D55U
ODS-D77U



Optical Disc Archive 1

OPERATION MANUAL

English

2nd Edition

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Appendix

Overview

Chapter 1

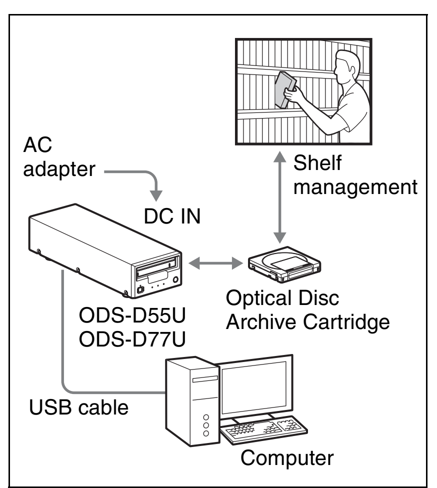
1-1 Features

The features of the ODS-D55U/D77U include the following.

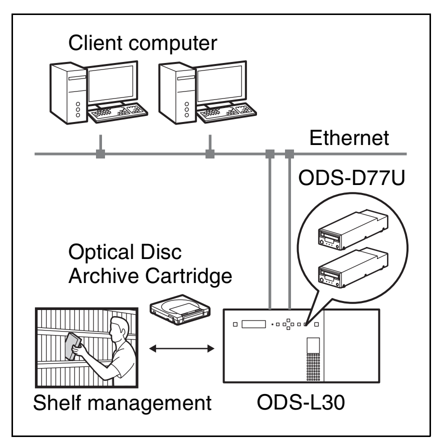
- Writable and readable the large amount of data with one cartridge
- Supported for both types of cartridges, write-once and rewritable
- IT-friendly system through USB interface
- Writable any user data as computer data
- Usable as an external device from a computer
- Menu operation from a computer using the Utility Software
- Rollback, verify, recover file, and duplicate volume functions
- Intuitive management of content realized with Content Manager.
- Check media function (available in the future)
- Encryption of content (available in a future firmware update) (ODS-D77U only)

1-2 Example of Use

The following figure shows an example of the shelf management control system for reading or writing material on a computer connected to this unit.



The following figure shows an example when installing this unit to ODS-L30 (ODS-D77U only).



1-3 Recommended Software

1-3-1 List of Software

Download the following software from the Sony Professional Products site for use with this unit.

Software	Supported OS	Function	Source
Optical Disc Archive Software	Windows/ Macintosh/ Linux	Basic software that allows you to read/write files with the computer connected to this unit. **Note** Install this software in advance before connecting this unit to the computer.	Download from the Sony Professional Products site [a]
Utility Software (Optical Disc Archive Utility)	Windows/ Macintosh/ Linux	Provides the following functions on a computer connected to this unit. • Display device and media information • Rollback media • Format media • Finalize media (when using Write-once media) • Recover broken files • Duplicate volume • Check media (available in the future) • Update firmware • Make settings **Note** The Utility Software is installed automatically when you install the Optical Disc Archive Software.	

Software	Supported OS	Function	Source
Content Manager	Windows/ Macintosh	This software provides the versatile functions to manage your contents that enable you to take full advantage of Optical Disc Archive Drive. To use this software, authentication by inputting the serial number of Content Manager [b] is required. For details, refer to Help in "Content Manager."	Download from the Sony Professional Products site [a]

a) Sony Professional Products site
- USA http://pro.sony.com
- Canada http://www.sonybiz.ca
- Latin America http://sonypro-latin.com
- Europe http://www.pro.sony.eu
- Japan http://www.sonybsc.com
- Asia http://pro.sony-asia.com
- Korea http://bp.sony.co.kr
- China http://pro.sony.com.cn

b) Each Optical Disc Archive Drive Unit has one Content Manager serial number. One serial number can only be used for one computer.
When using two or more computers, purchase additional serial numbers from the Sony Professional Products site.

1-3-2 System Requirements

The Optical Disc Archive Software and the Utility Software have been tested and found to run under the following conditions.

For system requirements of Content Manager, see Help in "Content Manager."

Note

These test results may not apply to all computers.

Windows

Item	Requirement
Processor	Intel Core 2 Duo 2.66 GHz or higher, or Intel Xeon 2 GHz or higher
Memory	32-bit machine: 2 GB or more, 64-bit machine: 2 GB× (number of the units) or more
Free hard disk space	32-bit machine: 16 GB or more, 64-bit machine: 8 GB+4 GB× (number of the units + 1) or more
Operating system	For details, see the Sony Professional Products site (page 7.)
Other	• SuperSpeed USB (USB 3.0) (SuperSpeed USB (USB 3.0) host controller required.) • Hi-Speed USB (USB 2.0) (Hi-Speed USB (USB 2.0) host controller required.)



Macintosh

Item	Requirement
Processor	Intel Core 2 Duo 2.2 GHz or higher, or Intel Xeon 2 GHz or higher
Memory	32-bit machine: 4 GB or more 64-bit machine: 4 GB or more, when connecting one unit. 2 GB× (number of the units) or more when connecting more than one unit.
Free hard disk space	32-bit machine: 16 GB or more, 64-bit machine: 8 GB+4 GB× (number of the units + 1) or more
Operating system	For details, see the Sony Professional Products site (page 7.)
Other	• Hi-Speed USB (USB 2.0) (Hi-Speed USB (USB 2.0) host controller required.) • SuperSpeed USB (USB 3.0) (SuperSpeed USB (USB 3.0) host controller required.) [a]

a) Compatible with the USB port of a Macintosh machine only.

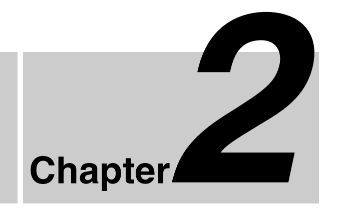
Linux

Item	Requirement
Processor	Intel Core 2 Duo 2.66 GHz or higher, or Intel Xeon 2 GHz or higher
Memory	32-bit machine: 2 GB or more, 64-bit machine: 2 GB× (number of the units) or more
Free hard disk space	32-bit machine: 16 GB or more, 64-bit machine: 8 GB+4 GB× (number of the units + 1) or more
Operating system	For details, see the Sony Professional Products site (page 7.)

For more details of software, see page 18.

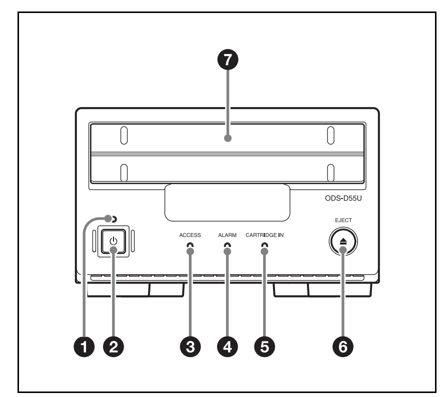
Notes

- The maximum number of connectable units for a 32- bit machine is one, and for a 64-bit machine is four.
- Optical Disc Archive Software does not support PowerPC or Mac OS X 10.5 or earlier.
- The operation is not guaranteed when connecting the unit via a USB hub.



Names and Functions of Parts

2-1 Front Panel



❶ (power) indicator
Lights green when the ⏻ (power) button is on.

❷ ⏻ (power) button
Switches the power on and off.

Note

Make sure you eject the cartridge from this unit before turning the power off. Be sure to eject the cartridge especially before moving this unit.

❸ ACCESS indicator
Flashes blue when the media is being accessed from the computer. However, this indicator flashes once a second while writing the media management data to the media is being held after the media access is finished.
During this data write hold time, you can still perform the operations including ejection of the cartridge and an operation from the computer.
The operation is actually processed after the media management data writing is completed.
The media management data writing is held for about 5 seconds.
Upon expiration of the data write hold time shown above, the media management data writing begins even if you do not eject the cartridge or perform any operation from the computer.

Note

Do not press the ⏻ (power) button to turn off, or do not disconnect either the power cord or USB cable while the ACCESS indicator is lighting or flashing. Doing so may lead to loss of data on the media.

❹ ALARM indicator
If a fault occurs in the unit, this flashes red, as shown in the following table.

Indicator	Meaning
Flashing four times a second	An error occurred (principally a hardware default).
Flashing once a second	An alarm not listed above occurred.

Note

The indicator may flash only for five seconds depending on the alarm.

You can check alarms generated by this unit, using the alarm log of the utility software. For details, refer to Help in the Utility Software.

If the indicator is flashing four times a second, and it is not possible to check the alarm log, contact your Sony service representative.

When the error is eliminated, the indicator goes off.

❺ CARTRIDGE IN indicator

Lights green when a cartridge is injected.
Flashes green when a cartridge is ejected.

❻ EJECT button

Ejects a cartridge *(see page 17)*.

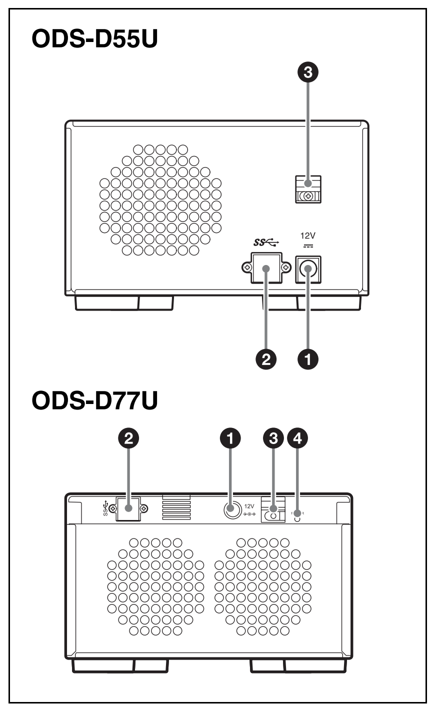
Notes

- This button is disabled while the media is being accessed. Either stop accessing the media before ejecting, or eject by an operation from the computer.
- When this unit is connected to a Macintosh computer, this button is disabled.

❼ Cartridge slot

With the label facing up, inject the cartridge *(see page 17)*.

2-2 Rear Panel



❶ DC power inlet connector

Connect to the AC power using the supplied AC adapter and a power cord (not supplied).

❷ USB connector (SuperSpeed USB (USB 3.0))

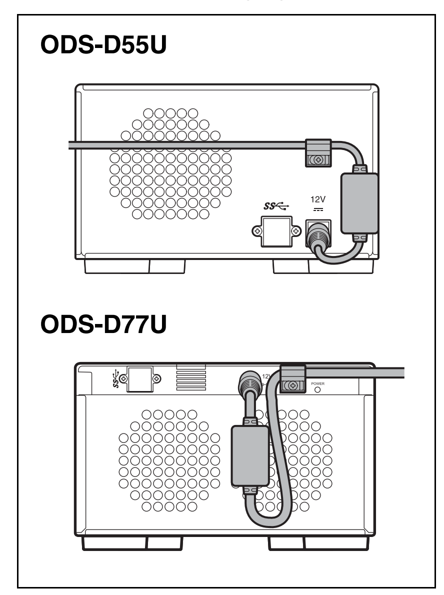
Use the supplied USB cable to connect to the computer.

Note

If the unit is not recognized by the computer, try disconnecting and reconnecting the USB cable, making sure it is correctly inserted.

❸ Cable clamper

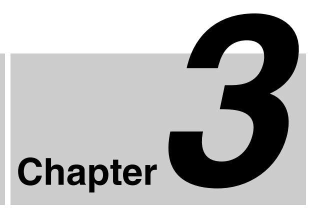
Use this clamper to fix the cable of the AC adapter.
Clip the cable with the clamper as shown in the following figure.



❹ POWER indicator

Lights green when the ⏻ (power) button is on.

Preparations



3-1 Setting Up the Unit

Make sure the unit is in a horizontal position when setting it up.

Notes

- The unit cannot be set up in a vertical position or at an angle.
- If the unit is not sufficiently horizontal, an ALARM indicator may blink.
- If the ALARM indicator blinks, place the unit in a horizontal position, turn the power off, then turn the power on again.
- When installing this unit to ODS-L30, refer to the ODS-L30 installation manual (ODS-D77U only).

3-2 Software Installation

To use this unit, the necessary software must first be installed on the computer to which it is connected.

Note

Operation of Optical Disc Archive Software or the Utility Software may be unstable if installed on a computer with certain anti-virus software, anti-spyware tools or UDF 2.5 or UDF 2.6 file system drivers of a non-standard operating system.
If operation is unstable, check the settings and possible conflict with the above mentioned software, then change the settings accordingly.

3-2-1 Windows Installation

To install the Optical Disc Archive Software and Utility Software

Download the Optical Disc Archive Software from the Sony Professional Products site (page 7).

Notes

- If an old version of the Optical Disc Archive Software is already installed, it must be uninstalled before you install the new version. Use "Add or Remove Programs" on the Control Panel to remove the old version of the Sony Optical Disc Archive Software. After doing so, be sure to restart the computer.
- After installation, the previous settings return to their default values.

3-2-2 Macintosh Installation

To install the Optical Disc Archive Software and Utility Software

Download the Optical Disc Archive Software from the Sony Professional Products site (page 7).

Note

Installing the Optical Disc Archive Software and utility software overwrites a previous installation.
Settings are preserved after the new installation.

3-2-3 Linux Installation

To install the Optical Disc Archive Software and Utility Software

Download the Optical Disc Archive Software from the Sony Professional Products site (page 7).

Notes

- If the Optical Disc Archive Software has not been installed to the computer, the computer may malfunction when connecting this unit. Install the Optical Disc Archive Software in advance before connecting this unit to the computer. If an error occurred with the computer, shut down the computer and disconnect the unit. Restart the computer and install the software. Then, connect this unit to the computer.
- Installing the Optical Disc Archive Software and utility software overwrites a previous installation. Settings from a previous installation are preserved for the new installation.
- If the Optical Disc Archive Software is uninstalled, the settings will have their default values when a new version of the Optical Disc Archive Software is installed.



3-3 Connections and Settings

3-3-1 Connecting to a Computer

By connecting this unit to a computer, you can use the utility software, and the other software.

For a connection example, see 1-2 "Example of Use" (page 4).

Notes

- Install the Optical Disc Archive Software *(see page 12)* in advance.
- To disconnect the ODS-D55U/D77U from a Windows computer, run the "Safely Remove Hardware" dialog, and then disconnect the cable.
- If you start a Windows computer with the cartridge injected, the computer may fail in normal operation or run sluggishly.
- The computer may not start properly if the unit's power is on, depending on the computer to which it is connected. In this case, turn off the power of this unit, or disconnect the USB cable, and then start the computer.

3-4 Power Preparations

This unit can be powered by the AC adapter.
Connect the supplied AC adapter and a power cord (not supplied) to the DC power inlet connector *(page 10)* on the rear panel of the unit.

Note

It is not possible to power this unit through a USB cable.

3-5 Handling Media

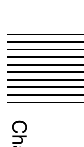
3-5-1 Media Used for Reading and Writing

This unit uses the following Optical Disc Archive Cartridges and similar media for reading and writing.

Cartridge	Media type	No. of files which can be created
ODC300R Capacity: 300GB	Write-once	60,000 or 240,000
ODC300RE Capacity: 300GB	Rewritable	60,000 or 240,000
ODC600R Capacity: 600GB	Write-once	60,000 or 240,000
ODC600RE Capacity: 600GB	Rewritable	60,000 or 240,000
ODC1200RE Capacity: 1.2TB	Rewritable	60,000 or 240,000
ODC1500R Capacity: 1.5TB	Write-once	60,000 or 240,000

Notes

- Deleting files from the media will not increase the available storage space for either write-once or rewritable type cartridges.
- In the case of write-once type cartridges, pay attention to the following points.
  - Reformatting the media will not increase the available storage space.
  - Repetitive file writing will consume the available writable space (for writing the media management data, etc.) on the media. If there is no available writable space on the media, file writing may be disabled, even if sufficient storage space remains.
  - No file can be written after the media is finalized.
- Select the number of files (60,000 or 240,000) which can be created during formatting.
- Rewritable media allows you to select the number of files that can be created during reformatting, while write-once media does not. The number of files (60,000 or 240,000) that can be created is retained when formatting for the first time.
- If the media has been formatted when the number of files which can be created is 240,000, depending on the recover file functions, the recovery rate may not be as good as the rate for 60,000 files.



Chapter 3 Preparations

3-5-2 Notes on Handling

Handling

The Optical Disc Archive Cartridge houses 12 discs in a shell, and is designed to allow handling free of risk from dust or fingerprints. However, if the cartridge is subjected to a severe shock, for example by dropping it, this can result in damage or scratching of the discs. If a disc is scratched, it may be impossible to write data, or to read the data written on the disc. The cartridge should be handled and stored carefully.

- Do not remove any discs from the cartridge.
- Do not disassemble the cartridge.

- If the disc order in a cartridge is changed, or other discs are substituted, the cartridge will no longer be recognized by the unit and cannot be used.
- The supplied adhesive labels are recommended for indexing cartridges. Apply the label in the correct position.

Storage

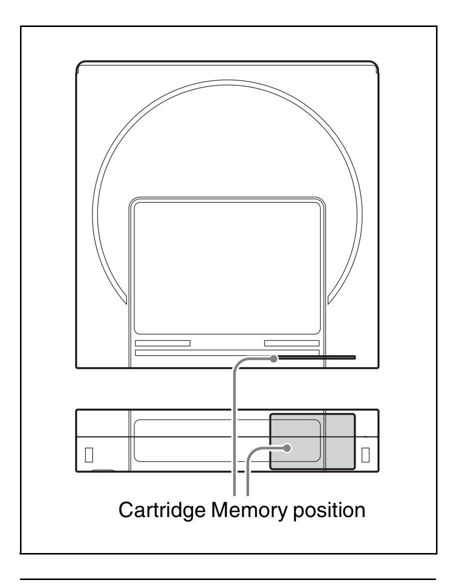
- Do not store cartridges where they may be subjected to direct sunlight, or in other places where the temperature or humidity is high.
- Do not leave cartridges where dust may be able to gain ingress.
- Store cartridges in their cases.

Care of the cartridge

- Remove dust and dirt on the outside of a cartridge using a soft dry cloth.
- If condensation forms, allow ample time to dry before use.

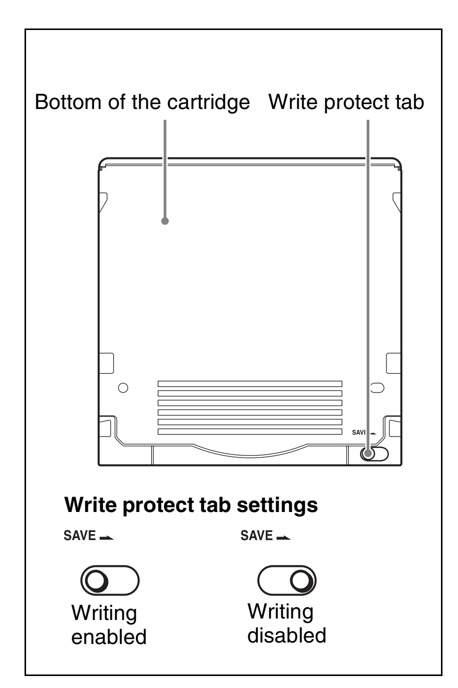
3-5-3 Cartridge Memory

The Optical Disc Archive Cartridge includes the Cartridge Memory, which enables contactless communication with this unit.
The basic information of Optical Disc Archive Cartridge is written in the Cartridge Memory.
Using the application software will enable the user-data to be written/read in the future.



3-5-4 Write-Protecting Media

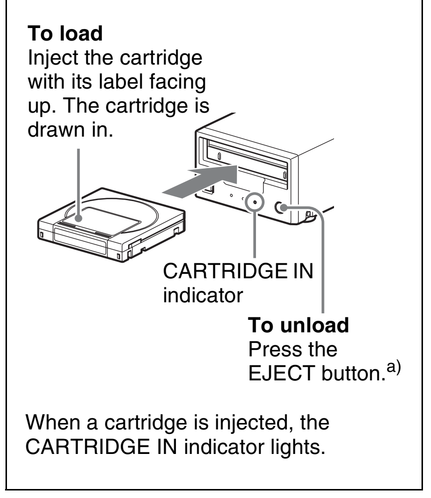
To prevent erasing contents of recorded media accidentally, slide the Write protect tab on the bottom of the cartridge (rear of label side) in the direction of the arrow, as shown in the following figure.



You can also perform the write-protect settings for media with Utility Software and File Manager.
If either the Write protect tab or the software is set to prohibit writing, the media remains in write-prohibit state.

3-5-5 Injecting or Ejecting a Cartridge

To inject or eject a cartridge, press the ⏻ (power) button to turn the unit on and light the indicator, and follow the procedures indicated in the following illustration.



a) Windows only

Notes

- If you inject an unformatted cartridge, it will be formatted automatically.
- When a file on the media is being operated, cartridge ejecting is restricted by the software on the Windows/Macintosh computer.
- If the cartridge cannot be ejected even if you press the EJECT button, turn the power off and on, then press the EJECT button. If the problem persists, contact your Sony service representative.

Using the Software

Chapter 4

4-1 Starting and Exiting the Utility Software

4-1-1 Starting/Displaying

First make sure that this unit is connected to the computer.

For connection details, see 3-3-1 “Connecting to a Computer” (page 14).

On a Windows computer

With the computer connected to this unit, carry out any of the following.

- If you created a shortcut icon on the desktop when you installed this software, double click the icon.
- Click the [Start] button on the computer and then select “Sony Optical Disc Archive Software”> “Optical Disc Archive Utility”.

On a Macintosh computer

Open the folder in which the Utility Software is installed, and then double click on the executable file of the Utility Software.

On a Linux computer

With the computer connected to this unit, carry out any of the following.

- Click the [Applications] menu on the computer and then select “Optical Disc Archive Utility” from “System tools”.
- Run “odautility” from the directory (/user/bin/odautility) where the Utility Software is installed.

This displays the home window of the Utility Software.

4-1-2 Exiting/Closing the Console Window

With the computer connected to this unit, carry out any of the following.

On a Windows computer

- Click the × (close) button in the top right corner of the window.
- Right click the title bar and select “Close” from the context menu.
- With this software activated, press Alt + F4 (press the F4 key while holding down the Alt key).
- Select “View”> “Close” from the menu bar.

On a Macintosh computer

- Select “Quit Optical Disc Archive Utility Software” from the Optical Disc Archive Utility menu.
- Click the title bar’s [Close] button.
- With this software activated, press Command + Q (press the Q key while holding down the Command key).

On a Linux computer

- Click the × (close) button in the top right corner of the window.
- Right click the title bar and select "Close (C)".
- With this software activated, press Alt + F4 (press the F4 key while holding down the Alt key).
- Select "View" > "Close" from the menu bar.

Appendix

Important Notes on Operation

Condensation

When this unit is moved from a cold place to a warmer place, or operated in high humidity, condensation may form on the optical pickup. If the unit is operated in this state, correct reading and writing may be impossible.
Note the following points, to avoid problems with condensation.

- If moving the unit in conditions where condensation is possible, make sure the cartridge is injected in advance.

About reducing the risk of knocking this unit

When a cartridge is injected, do not knock this unit.

About transporting this unit

Before transporting this unit, be sure to eject the cartridge.

About the read time of files

- When accessing multiple files at the same time, disc swapping may occur frequently. This will reduce the data transfer rate and increase the total time of operation significantly.
- When accessing a single file, disc swapping may also occur, depending on the recording position in the cartridge. This will take time before starting to read the file.

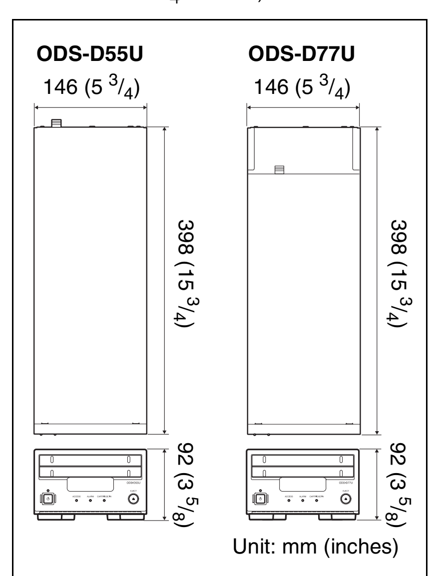
About the write time of files

When writing small capacity files (less than 100 MB) numerously and continuously, it will take longer for the writing to finish. In this case, setting the operation mode “Synchronize management data to media immediately after completion of writing files” to off, will improve the writing performance and the utilization rate.
However, if the malfunction (such as a power failure) occurs, the file recovery capability will be decreased.

Specifications

General

Power requirements
DC 12 V
Power consumption
ODS-D55U: 20 W
ODS-D77U: 45 W
Operating temperature
5ºC to 40ºC (41ºF to 104ºF)
Storage temperature
–20ºC to +60ºC (–4ºF to +140ºF)
Operating relative humidity
20% to 90%
Mass ODS-D55U: 4 kg (8 lb 13 oz)
ODS-D77U: 4.3 kg (9 lb 7.7 oz)
External dimensions (w/h/d)
146 mm × 92 mm × 398 mm ($5^3/_4$ inches × $3^5/_8$ inches × $15^3/_4$ inches)



Storage File Formats

Supports any file format

Supported media for writing and reading

ODC300R: 300GB
Write-once, 60,000 or 240,000 files can be created
ODC300RE: 300GB
Rewritable, 60,000 or 240,000 files can be created
ODC600R: 600GB
Write-once, 60,000 or 240,000 files can be created
ODC600RE: 600GB
Rewritable, 60,000 or 240,000 files can be created
ODC1200RE: 1.2TB
Rewritable, 60,000 or 240,000 files can be created
ODC1500R: 1.5TB
Write-once, 60,000 or 240,000 files can be created
And equivalences to above



Note

Calculated based on 1 GB = 1,000,000,000 bytes. After formatting, the actual usable capacity will be smaller than the capacity shown above.
The usable capacity may be reduced, depending on the situation; for example, recording a large number of files.
The usable capacity may decrease, depending on recorded file size.

Output/input connector

USB Connector (SuperSpeed USB (USB 3.0) support)

Accessories supplied

Operation Guide (1)
Operation manual CD-ROM (1)
Serial number (for authentication of Content Manager) (1)
AC adapter
Part No. 1-489-388-1x (1)
USB cable
Part No. 1-839-351-1x (Sony) (1)

Accessories not supplied

AC power cord
- For the customers in the U.S.A. and Canada
  Part No. 1-757-562-1x (125 V, 7 A, about 2.0 m)
- For the customers in European countries
  Part No. 1-575-131-8x (250 V, 2.5 A, about 2.0 m)

Optical Disc Archive Cartridge
ODC300R (300GB, write-once type)
ODC300RE (300GB, rewritable type)
ODC600R (600GB, write-once type)
ODC600RE (600GB, rewritable type)
ODC1200RE (1.2TB, rewritable type)
ODC1500R (1.5TB, write-once type)
Additional serial number

Design and specifications are subject to change without notice.

Notes
- Always make a test recording, and verify that it was recorded successfully.
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- Always verify that the unit is operating properly before use.
  SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.
- SONY WILL NOT BE LIABLE FOR CLAIMS OF ANY KIND MADE BY USERS OF THIS UNIT OR MADE BY THIRD PARTIES.
- SONY WILL NOT BE LIABLE FOR THE LOSS, REPAIR, OR REPRODUCTION OF ANY DATA RECORDED ON THE INTERNAL STORAGE SYSTEM, RECORDING MEDIA, EXTERNAL STORAGE SYSTEMS OR ANY OTHER MEDIA OR STORAGE SYSTEMS.

- SONY WILL NOT BE LIABLE FOR THE TERMINATION OR DISCONTINUATION OF ANY SERVICES RELATED TO THIS UNIT THAT MAY RESULT DUE TO CIRCUMSTANCES OF ANY KIND.

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